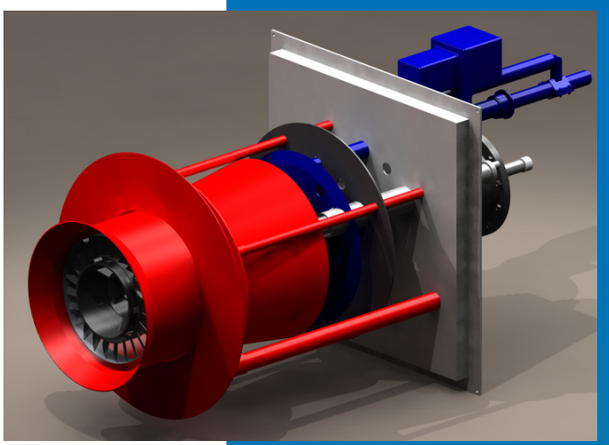
Ultra Low NO_x Burners

NO_x Reductions Exceeding 50% Across Operating Load Range

Ultra Low NO_x Coal Burners

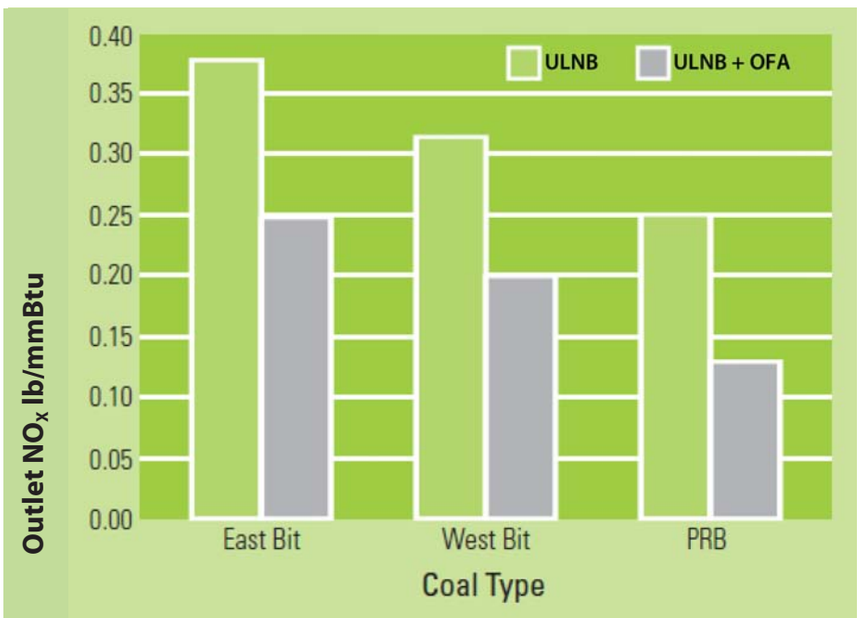
Fuel Tech's Ultra Low NO_x coal burners provide industrial and utility boiler owners with the ultimate solution to their NO_x compliance needs. Each system application is specifically designed to maximize NO_x reduction without sacrificing combustion performance or unit operation.

Fuels being fired range from sub-bituminous through low and high sulfur eastern bituminous coals. NO_x reductions exceeding 50% from baseline levels are achieved across the load range with minimal increases in unburned carbon.



State of the art components provide control over the following:

- NO_x Emissions
- Flame Shaping
- CO Emissions
- Burner Eyebrows
- Flyash LOI
- Furnace Slagging



Ultra Low NO_x Coal Burner Performance

Features Include:

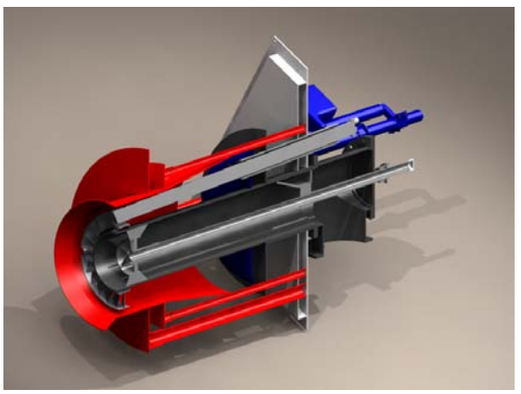
- Ease of operation
- Patent pending five (5) zone burner
- Balanced perimeter airflow
- Homogeneous coal flow
- "Clean release" nozzle
- Accurate secondary airflow measurement

FUEL TECH®
Technologies to enable clean efficient energy™

Burner Hardware

- Proven Low NO_x Designs
- Stabilize Low NO_x Flames for Low Excess Air Operation and Consistent Flame Scanning
- Burners installed on over 100 combustion units
- Up to 750MW size range

The Hardware



Cross section of coal burner

The burners are a venturi style, axial flow with swirl stabilization. Other than the electrically operated zone disc and the manually adjusted coal nozzle, which will be set during start up, there are no burner components that require operator adjustment. The register comprises a conical inlet section, parallel flow straightening section and a 60° diverging section formed by the burner throat. The zone disc located at the entrance to the venturi register controls secondary air flow. An electric linear actuator located at the 12 o'clock position on the burner front operates the zone disc. Pulverized coal and primary air enter the burner through a ceramic lined coal head and turns 90° into the coal pipe.

Fuel Tech Ultra Low NO_x coal burners provide the lowest possible NO_x control while maintaining optimum combustion.

Installed coal burner

Mechanical Attributes

- Ceramic Lined Inlet Elbow
- Ultra Low NO_x Swirler
- Ultra Low NO_x Coal Nozzle
- Insulated Front Plate
- Ceramic Lined Coal Barrel with 309 SS tip
- Venturi Low NO_x Register Assembly with Flow Control
- Ceramic Lined or AR400 Coal Distribution Disk

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